

**College Name:** College of Information and Cyberspace (CIC)

**Part-time/Distance Programs:** Master of Science in Government Information Leadership<sup>1</sup> and Graduate Certificates

**Course Formats:** Courses in the part-time program are offered in online, in residence, and hybrid, in three semesters (fall, spring, and summer).

**Mission:** The College of Information and Cyberspace (CIC) educates joint warfighters, national security leaders, and the cyber workforce on the cyber domain and information environment to lead, advise, and advance national and global security.

**AY 22-23 Master of Science Program Learning Outcomes (PLOs)<sup>2</sup>:**

A graduate of the CIC's MS Program will be able to:

- Evaluate the national security environment with a focus on the impact of the Information environment and cyberspace.
- Assess all instruments of national power with emphasis on the historical, contemporary, and emerging role of the information instrument
- Create cyber and information policies, strategies, and globally-integrated plans in support of national security objectives for the complex and dynamic character of competition, conflict and war.
- Analyze the ethical, legal, and policy implications of emerging and disruptive technology.
- Apply principles of strategic leadership to include effective communication, creative and critical thinking, decision making, and ethical conduct.

**Core courses** (30 credits): Strategic Leader Foundational Course; Strategic Thinking and Communication; International Challenges in Cyberspace; Foundations of the Information Environment; Strategic Competition in the Information Environment; National Security Strategy; Cyberlaw; Information, Warfare and Military Strategy; and Warfighting and Disruptive Technologies. Besides the 30-hour core, students take 6 credits from CIC's elective offerings.

**Emerging Faculty Skill Requirements (Including your ability to hire these skills):**

The CIC curriculum requires an interdisciplinary faculty with expertise in national security, cyberspace, and information. We have continuous need for experts in influence operations, cyber security, digital innovation, data management and analysis, and emerging technology (machine learning, artificial intelligence, etc.). These professionals are in high demand, and therefore able to command much higher salaries in the private sector. Those with the unique combination of joint, academic, and professional experience and qualifications are even more challenging to recruit.

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<sup>1</sup> Degree title is expected to change to "Strategic Information and Cyberspace Studies" effective AY 22-23.

<sup>2</sup> The curriculum of the part-time/online version of the MS program is closely aligned and meets the same learning outcomes as the resident, JPME II program. However, students do not earn JPME II credit.

**Graduate certificate programs in cyber and information areas:** The college offers six graduate certificates: Chief Data Officer, Chief Financial Officer, Chief Information Officer, Cyber Leadership, Chief Information Security Officer, and Information Technology Program Management.

**Continuing education or short courses in cyber and information areas:** CIC offers a 14-week Chief Information Officer Leadership Development Program and will offer a 14-week Cyber Leadership Development Program in AY22-23.

### **Graduate Certificates:**

Chief Data Officer Certificate (CDO): The CDO certificate provides graduate-level education for those involved in establishing, enabling, or running programs related to data strategies, data governance, data analytics, or data management across the Department of Defense and federal government. It provides a certificate which balances development of technical knowledge and skills fundamental for data analysis, as well as leader-oriented principles and techniques critical for data-empowered government organizations. The program is designed for students with diverse undergraduate backgrounds and work experience, enabling them to become strategic leaders skilled in building, developing and running data mature organizations and leveraging data as a strategic resource for national security.

Chief Financial Officer Leadership Certificate (CFO): Sponsored by the Under Secretary of Defense (Comptroller)/Chief Financial Officer and the Chief Financial Officer (CFO) Council, the CFO Academy was created in 2008 and is housed within National Defense University – College of Information and Cyberspace. As described in DoDI No. 1025.10, Chief Financial Officer Academy, dated June 22, 2018, the CFO Academy provides accredited graduate level education in the leadership of resource management that enables DOD’s efficient and effective use of financial and other resources that supports the DOD mission. CFO Academy courses aligns with the financial management competencies specified in the DoD Financial Management Certification Program, which is managed by the Under Secretary of Defense (Comptroller)/Chief Financial Officer.

Chief Information Officer Certificate: The CIO program is the recognized leader in graduate education for Federal CIO leaders and agency personnel. It addresses the Clinger-Cohen Act and other relevant legislation mandates as well as standard practices for interpretation and implementation of these legislative actions. The CIO Certificate is organized around subject areas directly related to CIO competencies identified by the Federal CIO Council.

Cyber Leadership Certificate: The Cyber Leadership (Cyber-L) program focuses on developing the skills and desired leadership attributes necessary to be an effective strategic leader in the cyberspace domain. The program achieves this through a rigorous curriculum that enhances the understanding of all aspects of cyberspace and how to best integrate cyberspace with the other elements of national power to achieve the nation’s strategic objective.

Chief Information Security Certificate: The Cyber-S program is a source of graduate-level information security education for those serving as the Chief Information Security Officer (CISO), Senior Agency Information Security Officers (SAISO), their respective staffs, and as cyber security managers. This program provides advanced education to respond to the requirements set forth in the Federal Information Security Management Act (FISMA).

Information Technology Program Management Certificate: The IT Program Management (ITPM) program is designed to meet the ever-increasing call for program managers across the federal government. The ITPM certificate is designed to assist agencies in complying with Office of Management and Budget (OMB) direction. The OMB requires that project managers qualified in accordance with Chief Information Officer (CIO) Council guidance manage all major information technology projects. The ITPM Certificate requires successful completion of a graduate-level curriculum to satisfy competencies established by the Office of Personnel Management (OPM) Interpretive Guidance for Project Management Positions and the CIO Council Clinger-Cohen Core Competencies. The certificate complements general project management training and the ANSI-recognized Guide to the Project Management Body of Knowledge. It also provides formal educational credit, one of the qualifications required for aware of the PMI Project Management Professional (PMP) Certificate.